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(54) Title: **ZIEGLER-NATTA CATALYST FOR OLEFIN POLYMERIZATION INCLUDING ARYLOXY GROUP AND METHOD FOR POLYMERIZATION OF OLEFIN USING THE SAME**

(57) Abstract: The present invention relates to a Ziegler-Natta catalyst for olefin polymerization and a method for polymerization of olefin using the same. Specifically, the invention relates to a Ziegler-Natta catalyst for olefin polymerization, which is produced by a method comprising a step of reacting a transition metal compound in which the transition metal having an oxidation number of 4 or more is selected from Groups IV, V or VI of the Periodic table and two or more aryloxy ligands are bound to the transition metal, with an organomagnesium compound, to reduce said transition metal compound to a reduced form in which the transition metal has an oxidation number of 3, and a method for polymerization of olefin using said catalyst.



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